ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Project Name:

Date Submitted: Click here to enter a date.

Date Reviewed: Click here to enter a date.

Review Outcome

☐	Accepted
☐	Accepted with Comments* (Correct in the As-Built Submittal) – See Notes Section
☐	Not Accepted (Must Correct and Resubmit) – See Notes Section

* If the review outcome indicates “Accepted with Comments”, the Licensed Professional need not re-submit the Proposed Design Submittal to EPA but should work with the design team to make sure the construction documents and final building are in compliance with the ENERGY STAR MFHR requirements. Failure to meet any of the requirements of the ENERGY STAR MFHR Program in the As-Built Submittal will result in the project not earning the ENERGY STAR.

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Project Information			
Name:		Developer	
City		Project Contact	
State		Licensed Prof.	

ENERGY STAR Multifamily High Rise Developer Partnership Agreement			
	Y	**N**	**N/A**
1. The ENERGY STAR MFHR Developer Partnership Agreement is signed by an authorized company representative			
- ENERGY STAR MFHR Developer Agreement Approved? ☐ Yes ☐ No			
Notes: *Click here to enter text.*			

ENERGY STAR Multifamily High Rise Project Application			
	Y	**N**	**N/A**
1. The project meets the eligibility requirements of the ENERGY STAR MFHR program.			
2. Installation of wall insulation has not yet occurred, based on the date indicated in the application.			
3. The Developer Partner has identified an eligible Licensed Professional.			
4. The number of units listed in Section E matches the total indicated in Section B (must include any units listed In Appendix A).			
- ENERGY STAR MFHR Project Application Approved? ☐ Yes ☐ No - ENERGY STAR MFHR Project Application on or after January 1, 2015? ☐ Yes ☐ No If **Yes**: - What is the project baseline code based on Project App? Choose an item. - Is the project past its projected permit date? ☐ Yes ☐ No ☐ Unsure			
Actions: **Complete** - Provide email confirmation of PA to partner and file copy of signed PA in partner's project file. ☐ - Enter project(s) into MFHR Project Tracker spreadsheet. ☐			
Notes: *Click here to enter text.*			

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

ENERGY STAR MFHR Submittal Validation Form

☐ **Performance Path**	☐ **Prescriptive Path**
☐ **ENERGY STAR MFHR Validation Form**	☐ **ENERGY STAR MFHR Validation Form**
☐ **Proposed Design Performance Path Calculator**	☐ **Proposed Design Performance Path Calculator**
☐ **Testing and Verification Worksheets**	☐ **Testing and Verification Worksheets**
☐ **Statement of Energy Design Intent**	☐ **Statement of Energy Design Intent**

	Y	N	N/A
1. The building and developer information consistent with the information provided on the ENERGY STAR MFHR Project Application.			
2. The Proposed Design Submittal submitted within the three year window for the project, per the date in Section K of the ENERGY STAR MFHR Project Application.			
3. The ENERGY STAR MFHR Validation Form includes the stamp and signature of the Licensed Professional, which are consistent with the name listed on the form and in the tracker.			

- ENERGY STAR MFHR Validation Form Approved?	☐ Yes ☐ No
- What is the project performance target on Submittal Validation Form?	Choose an item. above Choose an item.
- What is the current state baseline code?	Choose an item.
Actions:	**Complete**
- File copy of validation form in partner's file	☐

Notes:

Click here to enter text.

Reviewed by: Choose an item. Date: Click here to enter a date.

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Testing and Verification Worksheets - Prescriptive Path

The following review is based solely on the information provided by the Licensed Professional as part of the Proposed Design Submittal. All requirements must be verified using the ENERGY STAR MFHR Testing and Verification Protocols and documented using the ENERGY STAR MFHR Testing and Verification Worksheets and Photo Template before the building can be certified as ENERGY STAR.

Any items marked as "Y" indicate that the submittal adequately meets the requirements of the ENERGY STAR MFHR Prescriptive Path. However, compliance with requirements is ultimately determined by the As-Built Submittal and confirmed using photo documentation.

Any items marked as "N" indicate that the submittal does not demonstrate that the measure listed meets the requirements of the ENERGY STAR MFHR Prescriptive Path. More information on each non-compliant measure is available in the notes section below. The Licensed Professional is responsible for making sure that each requirement of the Prescriptive Path is met.

	Y	N	N/A	Comments in Excel
1. [Project Info] Climate Zone is consistent with building address				
2. [Prescriptive Path Checklist] Worksheet is complete, indicates no missed measures				
3. [Prescriptive Path Checklist] Drawing or specification location listed from the construction documents				
4. [1.1-APPLIANCES] Model numbers were verified on the ENERGY STAR directory				
5. [2.1-DHW] Water heater was verified on the AHRI directory, meets minimum efficiency, and is ENERGY STAR certified (where applicable)				
6. [2.1-DHW] Showerheads, lavatory faucets, and toilets were verified on the WaterSense directory and meet additional flow rate requirements				
7. [3.1-3.3-ENV] Envelope assembly layers are fully described and the U-values reference ASHRAE 90.1 Appendix A Table; Window-to-wall Ratio <30%				
8. [3.1-3.3-ENV] Envelope components meet climate zone specific requirements listed in Table 2 and 3 of the ENERGY STAR MFHR Prescriptive Path				
9. [4.1-GARAGES] Garages and sidewalks meet all prescriptive requirements and no space heating systems are specified for pipe freeze protection or comfort.				
10. [5.1,5.3-HEATING] Schedule is complete; models have been verified on the AHRI directory and meet efficiencies in Table 1 of the Prescriptive Path				
11. [5.2,5.4-COOLING] Schedule is complete; models have been verified on the AHRI directory and meet efficiencies in Table 1 of the Prescriptive Path				
12. [5.1-5.4 HEATING/COOLING] Apartment sample identified in duct leakage table				
13. [6.1-LIGHTING] In-unit, common area and outdoor lighting requirements meet prescriptive requirements (also see Performance Path Calculator)				
14. [8.1-INF_BLOWER DOOR TEST] Apartment sample identified in blower door table				
15. [8.2-VENT_SCHEDULE&TAB REPORT] All supply and exhaust systems identified, including kitchen ventilation that directly vents to the outdoors or to risers and garage fans with CO/NO2 sensors				
16. [8.2-VENT_SCHEDULE&TAB REPORT] Ventilation systems have been properly specified as ENERGY STAR & meet additional Prescriptive Path requirements				
17. [8.2-VENT_SCHEDULE&TAB REPORT] Apartment ventilation does not exceed ASHRAE 62.2-2007 ventilation rates by more than 50%				
18. [8.2-VENT_SCHEDULE&TAB REPORT] Non apartment ventilation does not exceed ASHRAE 62.1-2007 ventilation rates by more than 50%				
19. [8.2-VENT_SCHEDULE&TAB REPORT] Sample identified in ventilation test table				
20. [8.2-VENT_DUCT TIGHTNESS] Risers identified in ventilation tightness test table				

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Testing and Verification Worksheets - Prescriptive Path				
21. [9.1-METERS] Metering meets Prescriptive Path requirements				
22. Other				
- ENERGY STAR MFHR Testing and Verification Worksheets Approved? ☐ Yes ☐ No				
Actions: **Complete** - File copy of Testing and Verification Worksheets in the partner's file ☐				
Notes: *Click here to enter text.*				

Reviewed by: Choose an item. Date: Click here to enter a date.

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Performance Path Calculator – Prescriptive Path				
	Y	**N**	**N/A**	**Comments in Excel**
Basic Info				
1. Data is complete in all blue cells				
In-Unit Lighting, Interior Lighting, Exterior Lighting	**Y**	**N**	**N/A**	**Comments in Excel**
2. In-Unit Lighting: the number of fixtures and rooms is consistent with Basic Info				
3. In-Unit Lighting: instructions have been followed related to lit area and footcandles				
4. Interior Lighting: insufficient footcandles have been reported				
5. Interior Lighting: if default lumens per watt are not used, cut sheet is provided				
6. Interior Lighting: ballast power has been added for pin-type fixtures				
7. Interior and Exterior Lighting: the 2010 Baseline has been selected & not exceeded				
8. Exterior Lighting: fixture description provided and formulas used for Proposed Watts				
9. Exterior Lighting: Baseline allowance only calculated for spaces with Proposed lights				
Statement of Energy Design Intent	**Y**	**N**	**N/A**	**Comments in Excel**
10. The SEDI is properly filled out (e.g., includes correct property uses)				
11. The building information on the SEDI is consistent with the information provided in the T&V Worksheets				

- ENERGY STAR MFHR Proposed Design Performance Path Calculator Approved? ☐ Yes ☐ No
- Designed to Earn the ENERGY STAR recognition approved (upon PDS approval)? ☐ Yes ☐ No

Actions: **Complete**

- If either of the first two questions above is 'no' the ENERGY STAR MFHR Developer partner must be notified of the deficiency and provided with an opportunity to rectify it, if possible (See Notes Section).
- File copy of Performance Path Calculator in partner's file ☐

Notes:

Click here to enter text.

Reviewed by: Choose an item. Date: Click here to enter a date.

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Performance Path Calculator – Performance Path				
	Y	**N**	**N/A**	**Comments in Excel**
Basic Info				
1. Data is complete in all blue cells				
2. Lighting use & savings are within 5% of values in Table 6 of the Reporting Summary				
Reporting Summary	**Y**	**N**	**N/A**	**Comments in Excel**
3. Data is complete in all blue cells				
4. **[Table 1]** Project address is consistent with address on the Project Application				
5. **[Table 2]** Software used is ASHRAE 90.1 Appendix G compliant				
6. **[Table 2]** Baseline selected is appropriate based on application date and state code				
7. **[Table 2]** Weather file matches project location				
8. **[Table 3]** Number of stories, units and square footage matches Project Application				
9. **[Table 3]** Fuel match those listed in Table 6				
10. **[Table 3]** Commercial square footage is listed and energy use included in the model				
11. **[Table 5]** Baseline envelope matches Table 5.5 of the applicable ASHRAE 90.1 Standard (New Construction Only)				
12. **[Table 5]** Baseline envelope matches existing construction (Gut Rehab Only)				
13. **[Table 5]** Proposed envelope assembly U-values are consistent with ASHRAE 90.1 Appendix A and values reported in the T&V Worksheets				
14. **[Table 5]** Window to Wall Area is 40% or less in the Baseline				
15. **[Table 5]** Baseline window U-value is based on Proposed wall, rather than window				
16. **[Table 5]** Baseline HVAC system consistent with building heating fuel				
17. **[Table 5]** Ventilation systems are described and modeled per Simulation Guidelines				
18. **[Table 5]** Savings associated with renewable systems are not used to achieve the Performance Target				
19. **[Table 5]** Baseline components meet requirements of the Simulation Guidelines				
20. **[Table 5]** Proposed Design components meet requirements of the Simulation Guidelines, including modeling garage heating systems as a penalty				
21. **[Table 6]** End use electrical loads are within accepted limits				
22. **[Table 6]** End use gas/oil loads are within acceptable limits				
23. **[Table 6]** Total electric load savings are consistent with Proposed Design				
24. **[Table 6]** Total gas/oil load savings are consistent with Proposed Design				
25. **[Table 6]** End-use savings that contribute more than 3% toward the Performance Target are justified by the Proposed Design				
26. **[Table 7]** Cost of fuels are consistent with Energy Information Administration state average				
27. **[Table 8]** Costs are calculated using the rates in Table 7				
28. **[Table 8]** Baseline BTUs for each end use is consistent with Table 6				
29. **[Table 8]** Proposed BTUs for each end use is consistent with Table 6				

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Performance Path Calculator – Performance Path				
Windows eQUEST, Water Savings, DHW Demand, Appliances	**Y**	**N**	**N/A**	**Comments in Excel**
30. Data is complete in all blue cells				
31. Data is consistent with the Simulation Guidelines and Appendix G				
32. Data is consistent with values documented in the T&V Worksheets				
33. Appliance end-use is within 5% of values in Table 6 of the Reporting Summary				
34. Plug Loads are within 5% of values in Table 6 of the Reporting Summary				
In-Unit Lighting, Interior Lighting, Exterior Lighting	**Y**	**N**	**N/A**	**Comments in Excel**
35. In-Unit Lighting: the number of fixtures and rooms is consistent with Basic Info				
36. In-Unit Lighting: instructions have been followed related to lit area and footcandles				
37. Interior Lighting: insufficient footcandles have been reported				
38. Interior Lighting: all non 24/7 spaces indicate automatic lighting controls				
39. Interior Lighting: if default lumens per watt are not used, cut sheet is provided				
40. Interior Lighting: ballast power has been added for pin-type fixtures				
41. Interior and Exterior Lighting: the correct Baseline has been selected				
42. Exterior Lighting: fixture description provided and formulas used for Proposed Watts				
43. Exterior Lighting: Baseline allowance only calculated for spaces with Proposed lights				
Statement of Energy Design Intent	**Y**	**N**	**N/A**	**Comments in Excel**
44. The SEDI is properly filled out (e.g., includes correct property uses)				
45. Has reporting summary been approved?				
46. The building information on the SEDI is consistent with the information provided in the Reporting Summary				
47. ENERGY STAR Design Score is 75 or higher				

- What is the Baseline Code for this project? Choose an item.
- Does the Proposed Design meet the Performance Target of Choose an item. above Choose an item.? ☐ Yes ☐ No
- ENERGY STAR MFHR Proposed Design Reporting Summary Approved? ☐ Yes ☐ No
- Designed to Earn the ENERGY STAR recognition approved (upon PDS approval)? ☐ Yes ☐ No

Actions: **Complete**

- If either of the last three questions above is 'no' the ENERGY STAR MFHR Developer partner must be notified of the deficiency and provided with an opportunity to rectify it, if possible (See Notes Section).
- File copy of Performance Path Calculator in partner's file ☐

Notes:

Click here to enter text.

Reviewed by: Choose an item. Date: Click here to enter a date.

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Testing and Verification Worksheets – Performance Path

The following review is based solely on the information provided by the Licensed Professional as part of the Proposed Design Submittal. All requirements must be verified using the ENERGY STAR MFHR Testing and Verification Protocols and documented using the ENERGY STAR MFHR Testing and Verification Worksheets and Photo Template before the building can be certified as ENERGY STAR.

Any items marked as "Y" indicate that the submittal adequately meets the requirements of the ENERGY STAR MFHR Performance Path. However, compliance with requirements is ultimately determined by the As-Built Submittal and confirmed using photo documentation.

Any items marked as "N" indicate that the submittal does not demonstrate that the measure listed meets the requirements of the ENERGY STAR MFHR Performance Path. More information on each non-compliant measure is available in the notes section below. The Licensed Professional is responsible for making sure that each requirement of the Performance Path is met.

	Y	N	N/A	Comments in Excel
1. [Project Info] Climate Zone is consistent with building address				
2. [ERMs] Data consistent with Proposed Design Performance Path Calculator				
3. [ERMs] Drawing or specification location listed from the construction documents				
4. [Prerequisites checklist] Worksheet is complete and indicates no missed measures				
5. [1.1-APPLIANCES] Model numbers were verified on the ENERGY STAR directory				
6. [2.1-DHW] Water heater was verified on the AHRI directory				
7. [2.1-DHW] Showerheads and toilets were verified on the WaterSense directory. Faucet GPM ratings claimed at 80 psi have been confirmed.				
8. [3.1-3.3-ENV] Envelope assembly layers are fully described, consistent with ERMs and PPC, and the U-values reference ASHRAE 90.1 Appendix A Table				
9. [3.4-ENV_WINDOWS] Schedule is complete and consistent with PPC and ERMs				
10. [4.1-GARAGES] Garages and sidewalks meet all prerequisites				
11. [5.1,5.3-HEATING] Schedule is complete and consistent with PPC and ERMs. Systems have been verified on the AHRI directory				
12. [5.2,5.4-COOLING] Schedule is complete and consistent with PPC and ERMs. Systems have been verified on the AHRI directory				
13. [5.1-5.4 HEATING/COOLING] Apartment sample identified in duct leakage table				
14. [6.1-LIGHTING] In-unit, common area and outdoor lighting meet prerequisites				
15. [8.1-INF_BLOWER DOOR TEST] Apartment sample identified in blower door table				
16. [8.2-VENT_SCHEDULE&TAB REPORT] All supply and exhaust systems identified, including kitchen ventilation that directly vents to the outdoors or to risers				
17. [8.2-VENT_SCHEDULE&TAB REPORT] Ventilation systems have been properly specified as ENERGY STAR & meet rates specified by ASHRAE 62.1 and 62.2				
18. [8.2-VENT_SCHEDULE&TAB REPORT] Sample identified in ventilation test table				
19. [8.2-VENT_DUCT TIGHTNESS] Risers identified in ventilation tightness test table				
20. [9.1-METERS] Metering meets prerequisites				
21. Other				

- ENERGY STAR MFHR Testing and Verification Worksheets Approved? ☐ Yes ☐ No

Actions: **Complete**

- File copy of Testing and Verification Worksheets in the partner's file ☐

ENERGY STAR Multifamily High Rise Proposed Design Submittal Review Form

Proposed Design Testing and Verification Worksheets – Performance Path
Notes: *Click here to enter text.*
Reviewed by: Choose an item. Date: Click here to enter a date.